

### **REMARKS**

Claims 2-24 are currently pending in the application, as amended. Claim 1 has been cancelled. Claim 2 has been amended to correct its dependency and to cancel the element that the brake assembly is supported on a second side of the support member. In addition, claims 3 and 4 have been amended to correct their dependency and claims 5 and 6 have been retained in their currently pending form. Support for these amendments can be found in currently pending claims 2-6. New claims 7-24 have been added to specifically point out and distinctly claim the subject matter of the present invention. Support for new claims 7-24 can be found in previously pending claim 1, Figs. 1-2b and throughout the specification.

The first full and second paragraphs on page 5 of the original specification have been amended to specifically describe the web 15a of the rotary disk 15 and to correct several grammatical and typographical errors. This amendment to the first full and second paragraphs on page 5 of the specification adds the description of the web 15a in accordance with a below-described drawing amendment. Support for these amendments can be found in Fig. 1 and in the indicated paragraphs of the specification.

The drawings have been amended to replace Fig. 1 with new Fig. 1 (copy attached). New Fig. 1 includes reference numeral 15a identifying a support web 15a of the rotary disk 15. Support for this amendment can be found in original Fig. 1.

Accordingly, no new matter has been added.

### **TELEPHONE INTERVIEW**

The above-identified amendments were made as a result of a telephone interview conducted with the Examiner on September 5, 2003. Agreement was reached that the element that the machine room is located in a top floor of a building having a ceiling and the ceiling lying substantially in the same plane as an upper limit of the elevator passage in addition to the subject matter in new claim 7 would overcome the prior art currently of record in the application. The above-listed subject matter related to the ceilings has been included in dependent claim 24,

which depends from claim 7. This subject matter was added as a dependent claim so that the subject matter of the additional new dependent claims would be reviewed and searched in any subsequent search by the Examiner and so that the Examiner could further consider arguments directed to why, in the Applicant's opinion, new claim 7 is patentable over the current rejections presented by the Examiner. The undersigned would like to thank the Examiner for the courtesies extended during the interview.

### **INFORMATION DISCLOSURE STATEMENT**

An Information Disclosure Statement ("IDS") was filed with the U.S. Patent and Trademark Office on June 17, 2003 and a Supplemental IDS is also filed herewith. Applicants respectfully request that the Examiner consider each of the references of the June IDS and the Supplemental IDS, initial each of the references on the attached PTO/SB/08A forms indicating the consideration of each of the listed references and return the forms with any subsequent communication.

### **SPECIFICATION**

#### **Specification Objections - 37 C.F.R. § 1.75(d)(1)**

The Examiner objected to the specification because, in the Examiner's opinion, the specification failed to provide proper antecedent basis for the claimed phrases, "supporting members" and "radial web". The phrases, "supporting members" and "radial web" have been canceled from the claims. Applicants have amended the claims to consistently recite the phrases, "support member" and "web" to identify a support member 22 and a web 15a. In addition, the first full and second paragraphs on page 5 of the specification have been amended to correct grammatical and typographical errors, to consistently identify the support web 22 and to specifically describe the web 15a. Support for these amendments can be found in the first full and second paragraphs on page 5 of the original specification and in Fig. 1.

**Specification Objections - 35 U.S.C. § 112**

The Examiner objected to the specification under 35 U.S.C. § 112 as failing to provide an adequate description of the claimed invention. The Examiner notes that the claimed supporting member and radial web are not understood.

Applicants have amended the first full and second paragraphs on page 5 of the specification to distinctly and consistently describe the support member 22 and web 15a. In addition, Applicants have amended the claims to cancel any reference to the phrase, "supporting member". Further, Applicants have amended the drawings to include reference numeral 15a identifying a web of the rotary disk 15. Based upon the above amendments, Applicants respectfully submit that the specification is in full compliance with 35 U.S.C. § 112, first paragraph and respectfully request reconsideration and withdrawal of the objection to the specification under 35 U.S.C. § 112.

**DRAWINGS**

**Drawing Objections - 37 C.F.R. § 1.83(a)**

The Examiner objected to the drawing under 37 C.F.R. § 1.83(a) because, in the Examiner's opinion, the drawings do not show each and every claimed feature of the invention. Specifically, the Examiner notes that the radial web of claim 1 is not shown in the drawings.

Fig. 1 has been amended to include reference numeral 15a that identifies a web 15a of the rotary disk 15. The specification has also been amended to include a description of the web 15a, claim 1 has been canceled and the web is claimed in new dependent claim 10. A copy of replacement Fig. 1 is attached and includes new reference numeral 15a identifying the web. Support for these amendments can be found in the first full and second paragraphs on page 5 of the specification and in Fig. 1. Applicants respectfully request that replacement Fig. 1 be approved and the objection to the drawings be withdrawn.

## CLAIMS

### Claim Rejections - 35 U.S.C. § 112

The Examiner rejected claims 1-6 under 35 U.S.C. § 112, first paragraph, because, in the Examiner's opinion, the phrases "supporting member" and "radial web" are not understood for the same reasons as listed in the objection to the specification and are new matter.

Claim 1 has been canceled, thereby rendering the rejection of claim 1 moot.

In response to the above above-listed rejection, Applicants consistently use the phrase, "support member" to identify the support member 22 in pending claims 2-24. Applicants claim the web 15a of the rotary disk 15 in dependent claim 10, amended the first full paragraph and second paragraphs on page 5 of the specification to specifically describe and point out the web 15a and amended Fig. 1 to include reference numeral 15a identifying the web 15a. Support for these amendments can be found in the first full paragraph on page 5 of the specification and in Fig. 1.

The Examiner also rejected claims 1-6 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that the Applicants regard as the invention. Specifically, the Examiner notes that the supporting member, the radial web, and the motor assembly of claim 1 are unclear.

Claim 1 has been canceled, thereby rendering the rejection of this claim moot.

As was discussed above, Applicants have amended the specification and Fig. 1 to include reference numeral 15a identifying the web and have eliminated any reference to the phrases, "supporting member" and "motor assembly" from the claims. Pending claims 2-24 specifically claim a support member and drive assembly. Support for these amendments can be found in Fig. 1, original claims 1-6 and in the first full paragraph on page 5 of the specification.

In view of the above-listed amendments to the claims, Fig. 1 and the specification, Applicants respectfully request that the Examiner reconsider and withdraw any rejection of amended claims 2-6 under 35 U.S.C. § 112.

New claims 7-24 do not include the phrases, “radial web”, “supporting member” or “motor assembly”. New claims 7-24 consistently claim the web 15a, support member 22 and drive assembly. Accordingly, Applicants respectfully submit that new claims 7-24 are in full compliance with 35 U.S.C. § 112.

**Claim Rejections - 35 U.S.C. § 103**

The Examiner rejected claims 1-3, 5 and 6 under 35 U.S.C. § 103(a) as being unpatentable over Japanese Patent No. JP 11-79627 (“the Japanese reference”) in view of European Patent No. EP 0 719 724 A1 (“Aulanko”). The Examiner argues that the Japanese reference discloses each and every element of claims 1-3, 5 and 6 except for an actuating device being mounted in a machine room at the top floor of a building, which Aulanko discloses. The Examiner further argues that it would have been obvious to one having ordinary skill in the art to modify the Japanese reference such that its actuating device was mounted in a machine room at a top floor of a building in view of Aulanko. Applicants respectfully traverse this rejection.

Claim 1 has been canceled, rendering the rejection of claim 1 moot. Claim 2, which claims 5 and 6 are dependent upon, has been amended to depend on new claim 7 and claim 3 had been amended to depend on new claim 20, which is dependent upon new claim 7. New claim 7 has a similar scope to canceled claim 1 being narrower in some respects and broader in others. Applicants respectfully traverse any rejection of the subject matter of new claim 7.

The Japanese reference discloses a driving device for a home elevator including a speed reducer 20 (Abstract). Referring to Figs. 1 and 2, the speed reducer is driven by a motor 1 and outputs a reduced rotational speed to a wire drum 30 around which a rope 34 for an elevator is wrapped. The speed reducer 20 and drum 30 are supported by a support block 5. The motor 1 includes an output shaft 2, a rotor 3 and a stator 4. The rotor 3 is secured to the output shaft 2 by a rotary disk 9 that includes a web positioned on an opposite side of the stator 4 from the support block 5. The support block 5 is fixed to an attachment base 8 that is used to mount the driving device in a home.

Aulanko discloses a traction sheath elevator and a machine space for the traction sheath elevator. Referring to Fig. 4, the device of Aulanko includes an elevator cage 101 positioned in an elevator shaft 117 that is supported by a rope 103. The rope 103 supports the elevator cage 101 in the shaft 117 for ascending and descending motion in a building. The rope 103 is driven by a driving section 106 through a driving sheave 107. The driving section 106 and sheave 107 are secured to an inner wall 115 of the elevator shaft 117 near a top floor of the building and are located entirely within the shaft 117. An upper limit of the elevator shaft 117 is located above a plane of a ceiling plane of the building that the elevator is positioned within.

Referring to Figs. 1-2b, the present invention is directed to an elevator apparatus including a driving section having a speed reducer 20 and a sheave 27 that is driven by the driving section. The driving section is positioned in a machine room 50 adjacent a top of an elevator passage and the sheave 27 projects into the elevator passage. The machine room 50 is located in a top of a building having a ceiling 57d, wherein the ceiling 57d lies substantially in the same plane as an upper limit of the elevator passage. The positioning of the upper limit of the elevator passage in substantially the same plane as the ceiling 57d of the machine room 58 permits the building to have a relatively flat or planar roof top 50a or to eliminate any protrusion extending from the roof top 50a necessitated by an extended upper limit of the elevator passage. The drive sheave 27 drives a rope 29 to move the elevator cage 52 ascendingly and descendingly within the elevator passage. The drive sheave 27 is driven by the driving section, which includes a speed reducer 20, a motor assembly 10, an input shaft 21 and a supporting member 22. The motor assembly 10 includes a rotary disk 15 that extends radially from the input shaft 21. The supporting member 22 is positioned in facing relationship to a web 15a of the rotary disk 15 and supports the speed reducer 20

New claim 7 recites, *inter alia*, an elevator apparatus comprising: a cage; an elevator passage... a machine room adjacent a top of said elevator passage... a sheave around which a rope engaged with the cage is wound and a driving section... wherein said driving section having said speed-reducer is mounted in said machine room so that said sheave is projected into said elevator passage.

Applicants respectfully submit that any proper combination of the Japanese reference and Aulanko would not include each of the elements of new claim 7. Specifically, any combination of the Japanese reference and Aulanko would not include an elevator apparatus with a driving section that is mounted in a machine room adjacent a top of an elevator passage where the sheave that is driven by the driving section is projected into the elevator passage. Specifically, the Japanese reference does not show where the elevator apparatus is mounted and Aulanko requires the elevator apparatus to be mounted in the elevator shaft to a side wall of the shaft to reduce the space taken up by the elevator apparatus in a top of the building (col. 1, lines 46-55). Accordingly, at best, the combination of the Japanese reference and Aulanko would result in an elevator device attached to a side wall of an elevator cage and not the claimed elevator apparatus having a driving section mounted in a machine room adjacent a top of a building and a sheave projecting into the elevator passage. Therefore, Applicants respectfully submit that the subject matter of new claim 7 is patentable over the Japanese reference in view of Aulanko.

Claims 2, 3, 5 and 6 are dependent upon new claim 7. Accordingly, Applicants respectfully submit that claims 2, 3, 5 and 6 are patentable over the Japanese reference in view of Aulanko, based upon the same arguments outlined above and directed to new claim 7.

The Examiner also rejected claim 4 under 35 U.S.C. § 103 as being unpatentable over the Japanese reference in view of Aulanko and further in view of U.S. Patent No. 5,469,937 ("Hakala"). The Examiner argues that the combination of the Japanese reference and Aulanko discloses each and every element of claim 4 except for a brake located radially inwardly of a motor, which Hakala discloses. The Examiner further argues that it would have been obvious to one having ordinary skill in the art to modify the combined device of the Japanese reference and Aulanko to include a brake located radially inwardly of the motor upon reviewing Hakala.

Claim 4 was amended to depend upon new claim 20 which is dependent upon new claim 7. Accordingly, Applicants respectfully submit that the subject matter of claim 4 is patentable over any rejection based upon the combination of the Japanese reference in view of

Aulanko and further in view of Hakala, based upon the same arguments outlined above and directed to new claim 7.

The Examiner further rejected claims 1-3, 5 and 6 under 35 U.S.C. § 103(a) as being unpatentable over the Japanese reference in view of UK Patent Application No. GB 2 201 657 A (Beaulieu). The Examiner argues that the Japanese reference discloses each of the elements of claims 1-3, 5 and 6 except for the specific mounting of the elevator apparatus in a building, which Beaulieu discloses. The Examiner further argues that it would have been obvious to one having ordinary skill in the art to combine the Japanese reference with Beaulieu to construct the device of claims 1-3, 5 and 6. Applicants respectfully traverse this rejection.

Claim 1 has been canceled, rendering the rejection of claim 1 moot. Claim 2, which claims 5 and 6 are dependent upon, has been amended to depend on new claim 7 and claim 3 had been amended to depend on new claim 20, which is dependent upon new claim 7. New claim 7 has a similar scope to canceled claim 1 being narrower in some respects and broader in others. Applicants respectfully traverse any rejection of the subject matter of new claim 7.

Applicants respectfully submit that one having ordinary skill in the art would not modify the Japanese reference in view of Beaulieu to include each and every element of new claim 7 and there is no motivation for one having ordinary skill in the art to modify the Japanese reference in view of Beaulieu to construct a device that includes each and every element of new claim 7. Specifically, one having ordinary skill in the art, realizing that the Japanese reference is directed to a driving device for a home elevator, would not attempt to mount the driving device of the Japanese reference in a top floor of a building as is disclosed in Beaulieu. Beaulieu is directed to an industrial elevator driving device that hoists an elevator cage in an elevator shaft and a counterweight generally weighing 140-50% of the empty car weight. The driving device of the Japanese reference is specifically designed for home elevators and one having ordinary skill in the art would not mount this driving device to hoist the cage of the industrial elevator of Beaulieu. Further, there is no motivation for one having ordinary skill in the art to mount the driving device of the Japanese reference into a wall of the shaft of Beaulieu. Specifically, the



Japanese reference teaches only an attachment base 8 but does not suggest how the driving device is mounted. There is no motivation in either the Japanese reference of Beaulieu suggesting to one having ordinary skill in the art to mount the device of the Japanese reference into the wall of the elevator shaft of Beaulieu. In addition, Beaulieu discloses a drive motor located in a machine room with a sheave projecting into an elevator shaft but provides no motivation to replace the drive motor and sheave with the driving device for a home elevator of the Japanese reference. Accordingly, Applicants respectfully submit that new claim 7 is patentable over any combination of the Japanese reference and Beaulieu.

Claims 2, 3, 5 and 6 are dependent upon new claim 7. Therefore, Applicants respectfully request that the Examiner reconsider and withdraw any rejection of claims 2, 3, 5 and 6 based upon unpatentability over the Japanese reference in view of Beaulieu, based upon their dependence on new claim 7.

The Examiner further rejected claim 4 under 35 U.S.C. § 103(a) as being unpatentable over the Japanese reference in view of Beaulieu and further in view of Hakala. The Examiner argues that the combination of the Japanese reference in view of Beaulieu discloses each of the elements of claim 4 except for a brake located radially inwardly of a motor, which, in the Examiner's opinion, Hakala discloses. The Examiner further argues that it would have been obvious for one having ordinary skill in the art to modify the combined device of the Japanese reference in view of Beaulieu with the device of Hakala to construct a device having each of the elements of claim 4. Applicants respectfully traverse this rejection.

Claim 4 was amended to depend from claim 20, which is dependent upon new claim 7. Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw any rejection of claim 4 based upon unpatentability over the Japanese reference in view of Beaulieu and further in view of Hakala, based upon the dependence of claim 4 upon new claim 7.

**CONCLUSION**

In view of the foregoing Amendment and remarks, Applicants respectfully submit that the present application including claims 2-24 is in condition for allowance and such action is respectfully requested.

Respectfully submitted,

**HIROYUKI MIYOSHI *et al.***

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(Date)

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Attachment: *Drawing Replacement Sheet*



FIG. 1

